

CLAIMS

1 1-14. (canceled)

1 15. (previously presented) An integrated structure having a piezoelectric device, the
2 integrated structure comprising:
3 a substrate having an cavity;
4 a piezoelectric layer integral to the piezoelectric device and supported on the substrate, such
5 that the piezoelectric layer spans the cavity in the substrate to form a suspended membrane portion of the
6 piezoelectric layer; and
7 one or more conducting elements integral to the piezoelectric device and mounted on the
8 suspended membrane portion of the piezoelectric layer.

1 16. (previously presented) The device of claim 15, wherein the piezoelectric device
2 comprises a thin film resonator.

1 17. (previously presented) The device of claim 15, wherein the piezoelectric device
2 comprises a T-Cell building block.

1 18. (previously presented) The device of claim 15, wherein:
2 the suspended membrane portion of the piezoelectric layer has an inner side facing towards the
3 cavity in the substrate and an outer side facing away from the cavity in the substrate;
4 at least one conducting element is mounted on the inner side of the suspended membrane portion
5 of the piezoelectric layer; and
6 at least one conducting element is mounted on the outer side of the suspended membrane portion
7 of the piezoelectric layer.

1 19. (previously presented) The device of claim 15, further comprising one or more
2 conducting leads running along the suspended membrane portion of the piezoelectric layer from one or
3 more corresponding conducting elements towards an edge of the piezoelectric layer, wherein:
4 the integrated structure is mounted in an edge-on fashion within a recess of a package having one
5 or more bonding leads mated to the one or more conducting leads of the piezoelectric device.

1 20. (previously presented) The device of claim 19, wherein each bonding lead of the
2 package is mated to the corresponding conducting lead of the piezoelectric device by a reflowed solder
3 bump.

1 21-25. (canceled)

1 26. (new) The device of claim 15, wherein the piezoelectric layer is in direct contact with the
2 substrate on opposing sides of the cavity.

1 27. (new) The device of claim 15, wherein all support for the piezoelectric layer is provided
2 directly by the substrate without any intervening structure.

1 28. (new) The device of claim 18, wherein the at least one conducting element mounted on
2 the inner side extends within the cavity beyond the surface of the inner side.

1 29. (new) The device of claim 18, wherein the at least one conducting element mounted on
2 the inner side is not in direct contact with the substrate.

1 30. (new) The device of claim 29, wherein:
2 the piezoelectric layer is in direct contact with the substrate on opposing sides of the cavity;
3 all support for the piezoelectric layer is provided directly by the substrate without any intervening
4 structure; and
5 the at least one conducting element mounted on the inner side extends within the cavity beyond
6 the surface of the inner side.